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Engineering Note

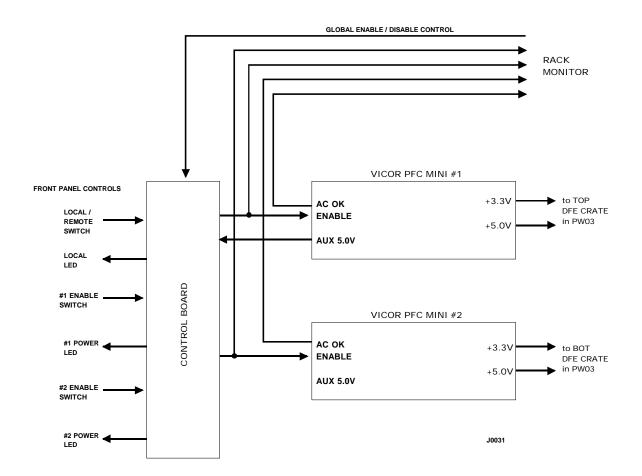|	
Date:	17 April 2001
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Project:	DFE Power Supplies – West Platform
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Subject:	DFE power supplies, west platform

Summary

There are two DFE crates located on the West Platform in PW03. The power supplies for these DFE crates are controlled remotely through the Rack Monitor located in PW03. A total of four status bits are brought back to the Rack Monitor. This document describes the power supply hardware and how to control it and monitor its status.

Power Supply Hardware

Local Mode Operation:

In local mode operation the two power supplies can be enabled and disabled independently.

1. Set the Remote/Local switch to the "local" position.
2. Verify that the Local LED is on.
3. Turn the #1 switch to the "enable" position.
4. Verify that the #1 Power LED is on and the bottom DFE crate in powered.
5. Same deal for supply #2.

Remote Mode Operation

In remote mode operation the two power supplies cannot be operated independantly – both supplies are controlled by a single bit. Remote monitoring of current and voltage is not supported.

1. The Remote/Local switch on the power supply front panel **MUST** be set to the "remote" postion.
2. The Rack Monitor digital I/O port direction switches must be set to the following:
3.

$$P2 = OUTPUT \text{ (DIP switch DOWN)}$$

$$P3 = INPUT \text{ (DIP switch UP)}$$

P2 -- CONTROL	
bit	meaning
0	top & bot supply enable (1=enable)

P3 -- STATUS	
bit	meaning
0	AC OK top DFE supply (1=OK)
1	AC OK bot DFE supply (1=OK)
2	top DFE supply enabled (1=enabled)
3	bot DFE supply enabled (1=enabled)

4. Read bits 0 and 1 from the P3 register. They should both be high to indicate that the AC power to the supplies is within the normal operating range. The AC OK bits are always valid, regardless of the enabled/state of the supplies.
5. Write a '1' to the P2 control register bit 0. Both supplies should turn on.
6. Verify that the top and bot supply enable bits in the P3 status register are set.